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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/800,895 | 03/08/2001 | Yoshiko Hatano | 2257-0176P-SP | 6812 |

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EXAMINER

REKSTAD, ERICK J

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2613

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/800,895

Applicant(s)

HATANO ET AL.

Examiner

Erick Rekstad

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,10,11,14, and 15 is/are rejected.
- 7) ☒ Claim(s) 3,4,7-9,12,13 and 16-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,4
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

Figures 6-9 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to because "Video Packet Header" is referred to as "Video Pocket Header" in figures 8C and 8D. The drawings are further objected to because "Macroblock" is referred to as "Macrobrock" in figure 4. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Allowable Subject Matter

Claims 3,4,7,8,12,13,16,17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Objections

Claims 9 and 18 are objected to as being a run-on sentence. The claims do not clearly describe the invention so that one of ordinary skill in the art would be able to perform the steps of the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,717,641 to Ando et al.

[claims 1 and 10]

In Figure 1, Ando teaches the method and device comprising:

Coding means for coding an external input signal in a macroblock unit (1); a storing means for storing a code output from said coding means (2); and code volume control means (6) for controlling transfer of said code stored in said storing means to data output means based on a code volume of said code obtained by said coding means such that a length of a video packet constituted by said code is a predetermined length or less (Col 2 Lines 7-26 and 49-67, Col 3 Lines 1-41, Fig. 1). Ando teaches the output of the device going to a receiving circuit in a VIDEO-ON-DEMAND system (Col 1 Lines 15-16, Col 2 Lines 21-26). Ando does not teach the use of a second storing means. It would be obvious to one skilled in the art at the time of the invention that a video receiver would contain an input buffer (Official Notice). It would be obvious to one skilled in the art at the time of the invention that the buffer of the video receiver would be the second storing means in the system.

[claims 2 and 11]

Ando teaches the device of claim 1 and method of claim 10, wherein said code volume control means controls storage of a stuffing in said second storing means based on a minimum code volume obtained for each unit image constituted by a video packet which is required for coding said unit image (Col 2 Lines 15-20, Col 3 Lines 5-19 and Lines 42-60, Col 4, Figs 1 and 2A-2C).

Claims 5,6,14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ando as applied to claims 1,2,10 and 11 above, and further in view of US Patent 6,219,381 to Sawada et al.

[claims 5 and 14]

Ando teaches the method and device of claims 1,2, 10 and 11. Ando does not teach the code volume control means determining a minimum code volume T_{min} to satisfy a following equation:

$$T_{min} \geq vbv_bits + 2 * R_p - vbv_bs$$

$$R_p = R / F$$

Wherein a bit count read from said second storing means in a unit image is represented by R_p , an occupancy of a VBV buffer in a last unit image is represented by vbv_bits , a size of said VBV buffer is represented by vbv_bs , a bit rate read from said second storing means is represented by R , and a rate of a unit image to be coded is represented by F . Sawada teaches the use of a video buffering verifier (VBV) in order to virtually decoded the output of the encoder, to verify the encoder generates a bit stream in such a manner as not to cause an overflow or underflow of the VBV input buffer (Col 5 Lines 15-22). Sawada further teaches the code volume control means

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(padding means 35 in Fig. 5) determining a minimum code volume T_{min} (dn+1) to satisfy a following equation:

$$T_{min} \geq vbv_bits + 2 * R_p - vbv_bs$$

$$R_p = R / F$$

Wherein a bit count read from said second storing means in a unit image is represented by R_p , an occupancy of a VBV buffer in a last unit image is represented by vbv_bits , a size of said VBV buffer is represented by vbv_bs , a bit rate read from said second storing means is represented by R , and a rate of a unit image to be coded is represented by F (Col 5 Lines 25-64). It would be obvious to one skilled in the art at the time of the invention to combine the method of video encoding of Ando with the VBV of Sawada in order to provide a video encoding system that provides video that will avoid overflow and underflow.

[claims 6 and 15]

Ando teaches the output bit rate is based on the requested bit rate of the receiver (Col 2 Lines 21-26). It would be obvious to one skilled in the art at the time of the invention that the receiver's request for a bit rate makes the rate variable.

Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ando as applied to claims 1,2,10 and 11 above, and further in view of US Patent 5,631,644 to Katata et al.

[claims 9 and 18]

As best understood by the examiner. Ando teaches the method and device of claims 1,2, 10 and 11. Ando further teaches the stuffing of the packets to meet a

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required threshold (Col 4 Lines 46-67). Ando does not specifically teach the steps taken to start and stop the stuffing of a packet. Katata teaches the steps to determine when to beginning stuffing and when to end stuffing by using the current code amount and the threshold amount (Col 6 Lines 35-67). It would be obvious to one skilled in the art at the time of the invention to combine the system of Ando with Katata's method of stuffing in order to provide a specific means for the addition of stuffing to a packet.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 6,668,015 to Kranawetter et al.

US Patent 6,157,674 to Oda et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 703-305-5543. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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